

# MODEL H8125 9.6V MINI GRINDER KIT WITH FLEX SHAFT INSTRUCTION MANUAL



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This manual provides critical safety instructions on the proper setup, operation, maintenance and service of this machine/equipment.

Failure to read, understand and follow the instructions given in this manual may result in serious personal injury, including amputation, electrocution or death.

The owner of this machine/equipment is solely responsible for its safe use. This responsibility includes but is not limited to proper installation in a safe environment, personnel training and usage authorization, proper inspection and maintenance, manual availability and comprehension, application of safety devices, blade/cutter integrity, and the usage of personal protective equipment.

The manufacturer will not be held liable for injury or property damage from negligence, improper training, machine modifications or misuse.



# **WARNING!**

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- Lead from lead-based paints.
- Crystalline silica from bricks, cement and other masonry products.
- Arsenic and chromium from chemically-treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: Work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

# **Table of Contents**

SECTION 1: SAFETY	2
Safety Instructions for Machinery	2
Additional Safety Instructions for Mini Grinder	
Additional Safety Instructions for	
Batteries and Chargers	
SECTION 2: INTRODUCTION	6
Foreword	6
Contact Information	6
SECTION 3: SET UP	7
Unpacking	7
Machine Data	7
Inventory	8
SECTION 4: OPERATIONS	9
Charging the Battery	9
Using the LED Light Attachment	10
Installing Bits	10
Using the Grinder	11
Higher Speed Uses	11
Lower Speed Uses	11
Installing the Flex Shaft	12
SECTION 5: MAINTENANCE	13
Daily Maintenance	13
Lubrication	13
Changing LED Light Attachment Batteries	13
Parts Breakdown	
WARRANTY AND RETURNS	15

# **SECTION 1: SAFETY**

# **AWARNING**

# For Your Own Safety Read Instruction Manual **Before Operating This Equipment**

The purpose of safety symbols is to attract your attention to possible hazardous conditions. This manual uses a series of symbols and signal words which are intended to convey the level of importance of the safety messages. The progression of symbols is described below. Remember that safety messages by themselves do not eliminate danger and are not a substitute for proper accident prevention measures.



INDANGER Indicates an imminently managed in the property of th Indicates an imminently hazardous situation which, if

AWARNING Indicates a potentially hazardous situation which, if not avoided, COULD result in death or serious injury.

ACAUTION Indicates a potentially hazardous situation which, if not avoided MAY result in minor avoided. not avoided, MAY result in minor or moderate injury. It may also be used to alert against unsafe practices.

# NOTICE

This symbol is used to alert the user to useful information about proper operation of the equipment.

# WARNING **Safety Instructions for Machinery**

- 1. READ THROUGH THE ENTIRE MANUAL BEFORE STARTING MACHINERY. Machinery presents serious injury hazards to untrained users.
- 2. ALWAYS USE ANSI APPROVED SAFETY GLASSES WHEN OPERATING MACHINERY. Everyday eyeglasses only have impact resistant lenses, they are NOT safety glasses.
- 3. ALWAYS WEAR NIOSH APPROVED RESPIRATOR WHEN OPERATING MACHINERY THAT PRODUCES DUST. Wood dust is a carcinogen and can cause cancer and severe respiratory illnesses.

- 4. ALWAYS USE **HEARING** PROTECTION WHEN OPERATING MACHINERY. Machinery noise can cause permanent hearing damage.
- 5. WEAR PROPER APPAREL. DO NOT wear loose clothing, gloves, neckties, rings, or jewelry which may get caught in moving parts. Wear protective hair covering to contain long hair and wear non-slip footwear.
- 6. NEVER OPERATE MACHINERY WHEN TIRED, OR UNDER THE INFLUENCE OF DRUGS ALCOHOL. Be mentally alert at all times when running machinery.

- ONLY ALLOW TRAINED AND PROP-ERLY SUPERVISED PERSONNEL TO OPERATE MACHINERY. Make sure operation instructions are safe and clearly understood.
- KEEP CHILDREN AND VISITORS AWAY. Keep all children and visitors a safe distance from the work area.
- MAKE WORKSHOP CHILD PROOF.
   Use padlocks, master switches, and remove switch keys.
- 10. NEVER LEAVE WHEN MACHINE IS RUNNING. Turn power OFF and allow all moving parts to come to a complete stop before leaving machine unattended.
- 11. DO NOT USE IN DANGEROUS ENVIRONMENTS. DO NOT use machinery in damp, wet locations, or where any flammable or noxious fumes may exist.
- 12. KEEP WORK AREA CLEAN AND WELL LIT. Clutter and dark shadows may cause accidents.
- 13. USE A GROUNDED EXTENSION CORD RATED FOR THE MACHINE AMPERAGE. Undersized cords overheat and lose power. Replace extension cords if they become damaged. DO NOT use extension cords for 220V machinery.
- 14. ALWAYS DISCONNECT FROM POWER SOURCE BEFORE SERVICING MACHINERY. Make sure switch is in OFF position before reconnecting.
- 15. MAINTAIN MACHINERY WITH CARE. Keep blades sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.

- 16. REMOVE ADJUSTING KEYS AND WRENCHES. Make a habit of checking for keys and adjusting wrenches before turning machinery ON.
- 17. CHECK FOR DAMAGED PARTS BEFORE USING MACHINERY. Check for binding and alignment of parts, broken parts, part mounting, loose bolts, and any other conditions that may affect machine operation. Repair or replace damaged parts.
- **18. USE RECOMMENDED ACCESSORIES.** Refer to the instruction manual for recommended accessories. The use of improper accessories may cause risk of injury.
- DO NOT FORCE MACHINERY. Work at the speed for which the machine or accessory was designed.
- 20. SECURE WORKPIECE. Use clamps or a vise to hold the workpiece when practical. A secured workpiece protects your hands and frees both hands to operate the machine.
- **21. DO NOT OVERREACH.** Keep proper footing and balance at all times.
- 22. MANY MACHINES WILL EJECT THE WORKPIECE TOWARD THE OPERATOR. Know and avoid conditions that cause the workpiece to "kickback."
- 23. BE AWARE THAT CERTAIN WOODS
  MAY CAUSE AN ALLERGIC REAC-

TION in people and animals, especially when exposed to fine dust. Make sure you know what type of wood dust you will be exposed to and always wear an approved respirator.

# **AWARNING**

# **Additional Safety Instructions for Mini Grinder**

- READ THIS MANUAL. This manual contains proper operating instructions for this grinder.
- OPERATION. DO NOT jam the grinder against the workpiece. Firmly grasp the grinder and ease it against the workpiece using light pressure.
- WORK AREA CONDITIONS. DO NOT use this grinder in a damp or wet location. Keep work area well lit. Do NOT use in the presence of flammable gases or liquids.
- GRINDER DESIGN. DO NOT force this tool beyond its capabilities. DO NOT modify this tool and do not use this grinder for any purpose for which it was not intended.
- 5. AVOID UNINTENTIONAL STARTING. Be sure the switch is in the OFF position when not in use and before plugging it in. DO NOT carry any tool with your hand on the power switch, whether it is energized or not.

- SHARP SURFACES. DO NOT place hands near the tooling surfaces of the grinder when in operation.
- DISCONNECT POWER. Always remove the battery before making any adjustment, changing tools, or performing any maintenance to the grinder.
- MACHINE INSPECTIONS. Perform machine inspections and maintenance service as required.
- FLEX SHAFT. DO NOT use the flex shaft with a tight bend. This may cause binding and damage the inner spindle.
- CLAMP THE WORKPIECE. DO NOT hold the workpiece with one hand and operate the grinder with the other.
- ATTEND TO YOUR GRINDER. Never walk away from the grinder and leave the tool running.
- **12. TEST RUN.** Always test run the grinder before starting any work.

# **AWARNING**

Like all machinery there is potential danger when operating this machine. Accidents are frequently caused by lack of familiarity or failure to pay attention. Use this machine with respect and caution to lessen the possibility of operator injury. If normal safety precautions are overlooked or ignored, serious personal injury may occur.



No list of safety guidelines can be complete. Every shop environment is different. Always consider safety first, as it applies to your individual working conditions. Use this mini grinder and other machinery with caution and respect. Failure to do so could result in serious personal injury, damage to equipment, or poor work results.

# **AWARNING**

# Additional Safety Instructions for Batteries and Chargers

- CHARGING EQUIPMENT. Only charge using the charger and batteries supplied with your grinder. DO NOT use batteries or charges from other cordless tools.
- 2. CHARGING ENVIRONMENT. Charge battery on a dry, hard surface in a shaded location with good ventilation. DO NOT place charger on or near flammable materials. DO NOT cover the charger when charging. Only charge the battery when the temperature is between 50°F-104°F (10°C-40°C). Charging in temperature beyond these extremes will damage the battery.
- CHARGER VOLTAGE. ONLY
  plug into a circuit that is 110-120V.
  Connecting into 220V will damage the
  charger, possible causing a fire or an
  explosion. DO NOT charge from a DC
  power supply or a generator.
- CORD CARE. Keep cord away from heat, oil, and sharp objects. DO NOT carry the charger by the cord, or yank the cord to unplug the charger.

- CHARGER DAMAGE. Replace charger if it has been dropped, damaged, or received a hard impact. Repair cord immediately if damaged.
- 6. SHORTING BATTERY. Avoid touching both battery terminals simultaneously with skin to prevent injury from an electrical shock, or metal to prevent a fire from a spark. Storing the battery in a box of screws or nails can cause fire from a spark.
- CORD LOCATION. Prevent tripping over the cord by placing charger close to the power supply. Avoid using an extension cord.
- DISCONNECT CHARGER. Unplug the charger when cleaning, or when not in use.
- 9. BATTERY DISPOSAL. The battery must be recycled or disposed of properly. DO NOT dispose of the battery in a landfill or incinerate. Combustion of some of the batteries' component materials can cause toxic fumes and possible explosion.

# **SECTION 2: INTRODUCTION**

### **Foreword**

We are proud to offer the Grizzly Model H8125 9.6V Mini Grinder Kit. This model is part of a growing Grizzly family of fine power tools. When used according to the guidelines set forth in this manual, you can expect years of trouble-free, enjoyable operation and proof of Grizzly's commitment to customer satisfaction.

The Model H8125 is a light-weight cordless rotary tool with a powerful 9.6 volt battery, well balanced for superior control, and a speed range of 3,600 to 23,300 RPM.

It is our pleasure to provide this manual with the Model H8125. It was written to encourage safety and to guide you through general operating procedures and maintenance.

The specifications, details, and photographs in this manual represent the Model H8125 as supplied when the manual was prepared. However, owing to Grizzly's policy of continuous improvement, changes may be made at any time with no obligation on the part of Grizzly.

### **Contact Information**

If you have any comments regarding this manual, please write to us at the following address:

Grizzly Industrial, Inc.
C/O Technical Documentation
P.O. Box 2069
Bellingham, WA 98227-2069
E-Mail: manuals@grizzly.com

Most importantly, we stand behind our tools. If you have any service questions or parts requests, please call or write us at the location listed below.

Grizzly Industrial, Inc.
1203 Lycoming Mall Circle
Muncy, PA 17756
Phone: (570) 546-9663
Fax: (800) 438-5901
E-Mail: techsupport@grizzly.com

Web Site: http://www.grizzly.com

# **SECTION 3: SET UP**

# **Unpacking**

Your Model H8125 was carefully packed when it left our warehouse. If you discover the Model H8125 is damaged after you have signed for delivery, *please call Customer Service immediately at (570) 546-9663 for advice.* 

Save the containers and all packing materials for possible inspection by the carrier or its agent. Otherwise, filing a freight claim can be difficult.

When you are completely satisfied with the condition of the shipment, you should inventory the equipment.

### **Machine Data**

Dimensions 9"L x 2"W
Housing Construction High Impact Plastic
Spindle & Collet Construction Brass
Chuck Body Construction Stainless Steel
Power Required 9.6VDC NiCad Battery

Battery Recharger	120VAC to 12VDC
Tool Speeds	. 3,600-23,300 RPM
LED Power Source	(2) 3VDC CR-927
Weight with Case	4 lbs.

## **Inventory**

The setup and operation instructions will be easier to understand if you first become familiar with the components of the Model H8125 9.6V Mini Grinder Kit. Match the letters in **Figure 1** with the inventory list below to identify each of the components that were shipped with your Model H8125.



Figure 1. Model H8125 inventory

- A. 9.6V Mini Grinder with Battery
- B. Battery Charger
- C. 9.6V NiCad Battery
- D. Accessory Kit
  - · 4-Piece Sanding Drum Set
  - · 2-Piece Buffing Wheel Set
  - · 36-Piece Sanding Disc Set
  - Collets ½", ½"
  - Square Stone Dresser
- E. Carrying Case
- F. Flex Shaft 42"
- G. 10-Piece Mounted Stone Set
- H. Collet Nut Wrench
- I. LED Light Attachment
- J. Bit Assortment
- K. AC/DC Adapter (not shown)

# **SECTION 4: OPERATIONS**



Read the manual before operation. Become familiar with this machine, its safety instructions, and its operation before beginning any work. Serious personal injury may result if safety or operational information is not understood or followed.

### Charging the Battery

To prevent potential problems during shipment, batteries are usually shipped with little or no charge. You must charge your new batteries before initial use.

**Note:** The time to fully charge a battery is approximately  $3-3^{1/2}$  hours.

### To charge the battery:

- **1.** Make sure the AC/DC adapter is not connected to a power supply.
- Connect the battery charger to the AC/ DC adapter.
- **3.** Press the two side tabs on the battery and slide the battery from the grinder.

- 4. Position the flat part of the battery bottom to the front of the charger, align the metal contacts on the battery with the metal flanges in the battery pack, then firmly press the battery into the charger.
- Plug the AC/DC adapter into a 110-120V power outlet—the green light on the charger will turn ON.

**Note:** DO NOT leave the battery in the energized charger indefinitely. The charger will NOT turn **OFF** automatically.

6. After 3-3½ hours in the energized charger, the battery will be fully charged. Remove the battery from the charger and unplug the AC/DC adapter.

# **AWARNING**

Make sure the grinder switch is turned all the way to the right and is in the "0" (*OFF*) position before installing the battery. Failure to heed this warning could result in serious personal injury.

### To install the battery:

- **1.** Align the arrows on the battery with the arrows on the grinder base.
- 2. Press the battery into the grinder until it snaps into place.

### **Using the LED Light Attachment**

The LED light attachment illuminates low light operations and is easily mounted on the grinder.

# To install and use the LED Light Attachment:

- REMOVE THE BATTERY FROM THE GRINDER!
- **2.** Unscrew and remove the collet shield from the nose of the grinder.
- Thread and hand-tighten the light attachment onto the grinder (see Figure 2).

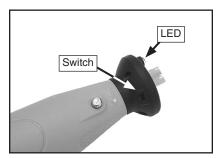


Figure 2. LED light attachment installed.

 Use the small switch on the underside of the light attachment to switch the LED's ON and OFF.

### **Installing Bits**

The Model H8125 uses bits and cutters with a ½" or a ½" diameter shaft. See the Grizzly catalog or *www.grizzly.com* for a complete listing of available bits and accessories.



DO NOT use bits or cutters with a cutting surface larger than 1". The bit could break apart under the stresses of high speed use causing serious personal injury.

### To install a bit:

- REMOVE THE BATTERY FROM THE GRINDER!
- Depress the collet lock (see Figure 3) and loosen the collet nut with the collet wrench. The collet lock will engage as the collet rotates.

**Note:** It is not necessary to completely remove the collet nut from the shaft unless you are also changing the collet.

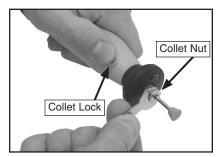


Figure 3. Collet lock.

- 3. Insert at least ½" of the bit into the collet.
- 4. Hand tighten the collet nut while depressing the collet lock. Then, use the collet wrench to tighten the collet nut an additional ½ turn.



Failure to wear ANSI approved safety glasses while operating the grinder could cause serious personal eye injury.

### Using the Grinder

Most operations performed with the Model H8125 will give the best results at higher speeds. However, slower speeds are ideal when working with plastics or other materials that melt easily.

Always test the bit and speed combination on a scrap piece of material similar to the workpiece. Trail and error is the best way to determine the ideal setup.

### To use the grinder:

- **1.** Make sure the battery is charged and properly inserted into the grinder.
- 2. Grasp the grinder with a secure grip.
- Turn the grinder ON by rotating the speed dial from "0" to the desired speed setting.
- Using light pressure, ease the working end of the bit against the workpiece.
- To turn the grinder *OFF*, rotate the speed dial to "0".

### **Higher Speed Uses**

Higher speeds are best for general carving, cutting, routing, and grinding. The bit removes material quicker at higher speeds.

### **Lower Speed Uses**

Lower speeds are best for grinding and cutting materials that have low melting points. Plastics, in particular, often melt from the heat of friction generated at higher speeds. Lower speeds are also best for polishing and buffing when using the felt accessories included.



Use lower speed settings to reduce friction when working with plastics or other materials with low melting points. Some materials can liquefy from the heat of friction and be thrown into operator, causing personal injury.

### Installing the Flex Shaft

The flex shaft allows you to work in tight spaces and increases control of the bit.

**Note:** DO NOT operate the flex shaft with a sharp bend in the cable. This can cause damage to the grinder motor and flex shaft

### To install the flex shaft:

- REMOVE THE BATTERY FROM THE GRINDER!
- 2. Remove the collet shield or LED light attachment, and loosen the collet nut on the grinder.
- Slide the inner spindle partially out of the flex shaft (see Figure 4).

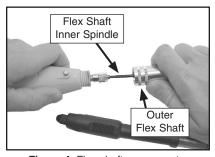


Figure 4. Flex shaft components.

 Insert the end of the inner spindle into the collet of the grinder and tighten the collet nut (see Page 10 for additional details).

- Slide the outer flex shaft up the inner spindle and thread it firmly onto the grinder.
- **6.** Loosen the collet nut on the working end of the flex shaft.
- 7. Insert a least ½" of the desired bit into the collet of the flex shaft.

**Note:** The flex shaft can be used with the ½" or the ½" collet.

- Insert the flex shaft tool into the hole at the side of the flex shaft, as shown in Figure 5, and hand tighten the collet nut.
- 9. Use the collet wrench to tighten the flex shaft collet nut an additional 1/3 turn.

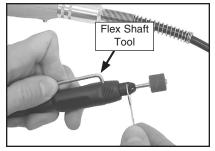


Figure 5. Tightening the flex shaft collet.

**Note:** The working end of the flex shaft has a tendency to whip about when in operation. Hold the working end of the flex shaft FIRMLY before turning the grinder **ON**.

# **SECTION 5: MAINTENANCE**

### **Daily Maintenance**

These procedures should be done after each use:

- Wipe the motor housing, flex shaft, and tool bits with a dry cloth, or blow off the dust and debris with compressed air.
- Check for damage to bits, cords, housing, or other accessories.

### Lubrication

Lubricate the flex shaft with a light lithium lubricant or light machine oil after 25–30 hours of use.

### To lubricate the flex shaft:

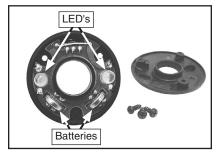
- Remove the inner spindle from the flex shaft.
- 2. Wipe a thin film of lubricant on the inner spindle.

Note: Too much lubricant on the inner spindle can become messy and possibly get on your workpiece. DO NOT use automotive grease because it is too thick.

Re-install the inner spindle into the flex shaft.

# Changing LED Light Attachment Batteries

- With the light attachment removed from the grinder, unscrew the three Phillips head screws from the rim of the device.
- Carefully separate the halves of the light attachment and identify the two batteries (see Figure 6).



**Figure 6.** LED light attachment components.

Replace the batteries with two CR-927 3VDC batteries.

Note: For best performance of the LED light attachment, replace both batteries at the same time. Also, when installing the new batteries, be sure to match the polarity markings in the battery compartment with the batteries.

 Bring the two halves of the light attachment together and secure with the three Phillips head screws.

### **Parts Breakdown**



REF	PART #	DESCRIPTION
1	PH8125001	PLASTIC CARRYING CASE
2	PHTEK1	TAP SCREW #6 X 1/2
3	PH8125003	BOTTOM COVER
4	PH8125004	MOTOR/SWITCH/SPINDLE ASSY
5	PH8125005	TOP COVER
6	PH8125006	SPINDLE LOCK ASSY
7	PH8125007	COLLET 1/8"
8	PH8125008	COLLET 1/4"
9	PH8125009	COLLET NUT
10	PH8125010	COLLET SHIELD
11	PHTEK28	TAP SCREW #4 X 3/8
12	PH8125012	LED ASSEMBLY BASE
13	PH8125013	BATTERY CR-927 3VDC
14	PH8125014	LED ASSEMBLY COVER
15	PH8125015	ADAPTER 120VAC-12VDC
16	PH8125016	BATTERY CHARGER 9.6V
17	PH8125017	BATTERY NI-CD 9.6V
18	PH8125018	ACCESSORY KIT
19	PH8125019	FLEX SHAFT
20	PH8125020	FLEX SHAFT INNER SPINDLE
21	PH8125021	FLEX SHAFT COLLET NUT
22	PH8125022	FLEX SHAFT TOOL

# WARRANTY AND RETURNS

Grizzly Industrial, Inc. warrants every product it sells for a period of **1 year** to the original purchaser from the date of purchase. This warranty does not apply to defects due directly or indirectly to misuse, abuse, negligence, accidents, repairs or alterations or lack of maintenance. This is Grizzly's sole written warranty and any and all warranties that may be implied by law, including any merchantability or fitness, for any particular purpose, are hereby limited to the duration of this written warranty. We do not warrant or represent that the merchandise complies with the provisions of any law or acts unless the manufacturer so warrants. In no event shall Grizzly's liability under this warranty exceed the purchase price paid for the product and any legal actions brought against Grizzly shall be tried in the State of Washington, County of Whatcom.

We shall in no event be liable for death, injuries to persons or property or for incidental, contingent, special, or consequential damages arising from the use of our products.

To take advantage of this warranty, contact us by mail or phone and give us all the details. We will then issue you a "Return Authorization Number," which must be clearly posted on the outside as well as the inside of the carton. We will not accept any item back without this number. Proof of purchase must accompany the merchandise.

The manufacturers reserve the right to change specifications at any time because they constantly strive to achieve better quality equipment. We make every effort to ensure that our products meet high quality and durability standards and we hope you never need to use this warranty.

Please feel free to write or call us if you have any questions about the machine or the manual.

Grizzly Industrial, Inc. 1203 Lycoming Mall Circle Muncy, PA 17756 Phone: (570) 546-9663 Fax: (800) 438-5901

E-Mail: techsupport@grizzly.com

Web Site: http://www.grizzly.com

Thank you again for your business and continued support. We hope to serve you again soon!



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	e following information is given or o us develop better products and			
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2.	Which of the following magaz	zines do you subsc	ribe to?	
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3.	What is your annual househousehousehousehousehousehousehouse	old income? \$30,000-\$ \$60,000-\$		\$40,000-\$49,000 \$70,000+
4.	What is your age group?20-2950-59	30-39 60-69	-	40-49 70+
5.	How long have you been a w		orker? 8-20 Years	s20+ Years
6.	How many of your machines0-2		/? 6-9	10+
7.	Do you think your machine re	epresents a good v	alue?Ye	sNo
8.	Would you recommend Grizz	ly Industrial to a fri	end?Ye	sNo
9.	Would you allow us to use yo Note: We never use names r	our name as a refe nore than 3 times.	rence for our co	ustomers in your area sNo
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